

XEVA 320 SERIES

Area-scan SWIR Camera

- SWIR cooled camera with 320 x 256 resolution
- In-house manufactured InGaAs sensor



VERSATILE InGaAs CAMERA WITH VARIOUS COOLING OPTIONS

The Xeva 320 series is based on an in-house manufactured InGaAs detector with a 320 x 256 pixel resolution.

The Xeva 320 cameras offer frame rates of more than 340 Hz.

The camera comes with a CameraLink or USB interface.

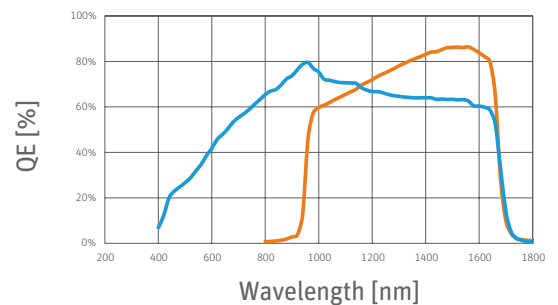
A visible enhanced short-wave infrared (vSWIR) option for extended wavelength response into the visible band is available.

DESIGNED FOR USE IN

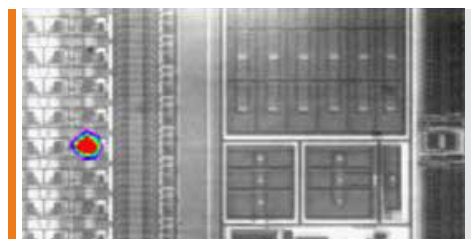
- Machine Vision
- Safety & Security
- Scientific & Advanced research
- Medical

ADVANTAGES

- vSWIR optional
- Sensor cooling available for increased exposure time range
- Low dark current
- USB and/or CameraLink interfacing options
- Versatility with gain modes



Crack inspection (solar wafer)



Semiconductor inspection



Art inspection

SPECIFICATIONS

Camera Specifications	Xeva 1.7 320 TE1 USB 100	Xeva 1.7 320 TE1 USB 100 vSWIR	Xeva 1.7 320 TE3 USB 100	Xeva 1.7 320 TE1 CL 60/100/350	Xeva 1.7 320 TE1 CL 60/100/350 vSWIR	Xeva 1.7 320 TE3 CL 60/100/350
Mechanical specifications						
Approximate Dimensions - excluding lens [width x height x length] [mm]	88 X 111 X 107	88 X 111 X 107	88 X 111 X 114	88 X 111 X 107	88 X 111 X 107	88 X 111 X 114
Weight [gr] - excluding lens	1300					
Camera cooling	Forced convection [fan]					
Optical interface	C-mount or M42					
Connector USB	4-pin TRIAD 01	4-pin TRIAD 01	4-pin TRIAD 01	Mini-USB	Mini-USB	Mini-USB
Connector CameraLink	-	-	-	Standard MDR	Standard MDR	Standard MDR
Connector power	4-pin TRIAD 01					
Connector trigger	5-pin TRIAD 01					
Environmental & power specifications						
Ambient operating temperature range [°C]	From 0 to +50					
Storage temperature [°C]	From -40 to +80					
Power consumption [W]	Up to 30					
Power supply voltage	DC 12 V					
Regulatory compliance	CE, RoHS					
Electro-optical specifications						
Image format [pixels]	320 x 256					
Pixel pitch [µm]	30					
Detector type	InGaAs photodiode array with CTIA ROIC					
Sensorcooling	TE cooler	TE cooler	3-stage TE cooler	TE cooler	TE cooler	3-stage TE cooler
Integration type	Snapshot - global shutter					
Active area and diagonal [mm]	9.6 x 7.68 [diagonal 12.3]					
Optical fill factor	100%					
Spectral range [nm]	900 - 1700	500 - 1700	900 - 1700	900 - 1700	500 - 1700	900 - 1700
Quantum efficiency	~80% [typical peak value]					
Gain modes	High Gain [HG] and High Dynamic Range [HDR]					
Full well capacities [electrons]	170k [HG] and 3.5M [HDR]					
Read noise [electrons]	150 [HG] and 1000 [HDR]					
Dark current [electrons/second]	<200k at 280K sensor temperature	<200k at 280K sensor temperature	<10k at 223K sensor temperature	<200k at 280K sensor temperature	<200k at 280K sensor temperature	<10k at 223K sensor temperature
Read out mode	ITR					
Pixel operability	>99%					
Preconfigured exposure time range [ms]	1 - 20	1 - 20	1 - 200; max exposure time >10 seconds in HG	1 - 20	1 - 20	1 - 200; max exposure time >10 seconds in HG
Max frame rate [Hz] [full frame]	100	100	100	60, 100 or 344	60, 100 or 344	60, 100 or 344
Region of interest	Yes	Yes	Yes	Yes [not for 60 and 100 model]	Yes [not for 60 and 100 model]	Yes [not for 60 and 100 model]
Min region size [pixels]	32 x 8	32 x 8	32 x 8	128 x 8 [not for 60 and 100 model]	28 x 8 [not for 60 and 100 model]	28 x 8 [not for 60 and 100 model]
Max frame rate [Hz] [min region size]	>10000	>10000	>10000	>10000 [not for 60 and 100 model]	>10000 [not for 60 and 100 model]	>10000 [not for 60 and 100 model]
Analog-to-Digital [ADC] [bits]	12	12	12	14	14	14
Command and control	USB 2.0					
Digital output format	USB 2.0	USB 2.0	USB 2.0	CameraLink [14 bit] [max 100 Hz frame rate with USB 2.0]		
Trigger	In via trigger connector	In via trigger connector	In via trigger connector	In via trigger connector - only recommended with CameraLink data interface	In via trigger connector - only recommended with CameraLink data interface	In via trigger connector - only recommended with CameraLink data interface
Product selector guide						
Part number	XEN-000100	XEN-000147	XEN-000101	XEN-000104 [60]	XEN-000165 [60]	XEN-000108 [60]
	-	-	-	XEN-000105 [100]	XEN-000106 [100]	XEN-000109 [100]
	-	-	-	XEN-000107 [350]	XEN-000148 [350]	XEN-000110 [350]

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Infrared Solutions
ISO 9001:2015